



Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

AS

PHYSICAL EDUCATION

Factors affecting participation in physical activity and sport

Tuesday 23 May 2017

Morning

Time allowed: 2 hours

Materials

For this paper you may use:

- a calculator.

Instructions

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions. You must answer the questions in the spaces provided. Do **not** write on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 84.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

For Examiner's Use

Section	Mark
A	
B	
C	
TOTAL	



J U N 1 7 7 5 8 1 W 0 1

IB/G/Jun17/E7



7581/W

Section A

Applied physiology

Answer **all** questions in this section.For questions with four responses only **one** answer per question is allowed.

For each answer completely fill in the circle alongside the appropriate answer.

CORRECT METHOD WRONG METHODS If you want to change your answer you must cross out your original answer as shown. If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown. 

0 1

Which **one** of the following statements accurately describes Starling's law of the heart?

[1 mark]

- A** Increased action of skeletal muscles to increase venous return
- B** Increased heart rate during long periods of exercise at the same intensity
- C** Increased rate of oxygen transport by the circulatory system
- D** Increased venous return leading to increased stroke volume

0 2

Fitness testing needs to be valid.

Which **one** of the following statements accurately describes validity in relation to fitness testing?

[1 mark]

- A** A test based on observations about the quality of the performance
- B** A test that gives you consistent results if the correct protocol is followed
- C** A test that measures what it sets out to measure
- D** A test that provides numerical measurements



0 3

Figure 1 shows an athlete hurdling.

Figure 1



0 3 . 1

Identify the type of joint, the joint action and the main agonist at the ankle, labelled **A**, as the athlete clears the hurdle.

[3 marks]

Type of joint: _____

Joint action: _____

Main agonist: _____

0 3 . 2

To clear the hurdle, hip flexion occurs.

State the plane **and** the axis around which hip flexion takes place.

[2 marks]

Plane: _____

Axis: _____

Turn over ►

0 3 . 3

The ankle operates as a lever as the athlete pushes off the ground.

Identify the class of lever operating at the ankle **and** explain the mechanical advantage of the class of lever for the athlete.

[3 marks]

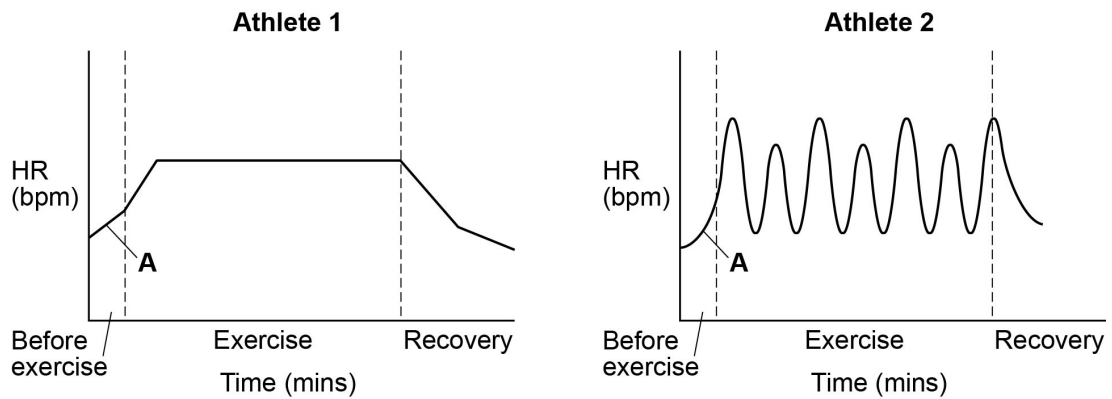
Class of lever at the ankle: _____

Explanation: _____

0 4

Figure 2 shows heart rate graphs for two athletes before, during and after an exercise session. Each athlete is using a different training method.

Figure 2



0 4 . 1

State the term used to describe the increase in heart rate labelled **A** and name the hormone that causes this increase in heart rate.

[2 marks]



0 4 . 2

Use **Figure 2** to identify the type of training method each athlete is using in the exercise session. Justify your answers.

[4 marks]

Training method used by athlete 1: _____

Justification: _____

Training method used by athlete 2: _____

Justification: _____

0 5

Smoking is a poor lifestyle choice because of the negative effect it can have on health and performance.

Identify **one** physiological effect of smoking on the respiratory system **and** explain its impact on performance in endurance events.

[4 marks]

Turn over ►



0	6
---	---

It is important for sprinters to push off the blocks effectively to achieve a fast start.

Using Newton's first and second laws of linear motion **and** knowledge of the neuromuscular system, analyse how a sprinter is able to achieve a fast start.

[8 marks]



Extra space _____

28



Section B**Skill acquisition and sports psychology**

Answer **all** questions in this section.

0	7
---	---

A swimming teacher may use floats and arm bands with a group of beginners to keep them safe when they are learning to swim.

Identify this type of guidance.

[1 mark]

A Manual

B Mechanical

C Verbal

D Visual

0	8
---	---

'Feelings of apprehension and worry due to a tendency to view all competitive situations as threatening.'

Identify this type of anxiety.

[1 mark]

A Cognitive anxiety

B Competitive state anxiety

C Competitive trait anxiety

D Somatic anxiety

Turn over ►



0	9
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In most sports, coaches can give feedback during a break in play.

Identify **and** describe **two** different types of feedback that a coach could give during a break in play. Give a sporting example to support each answer.

[4 marks]

Type of feedback 1: _____

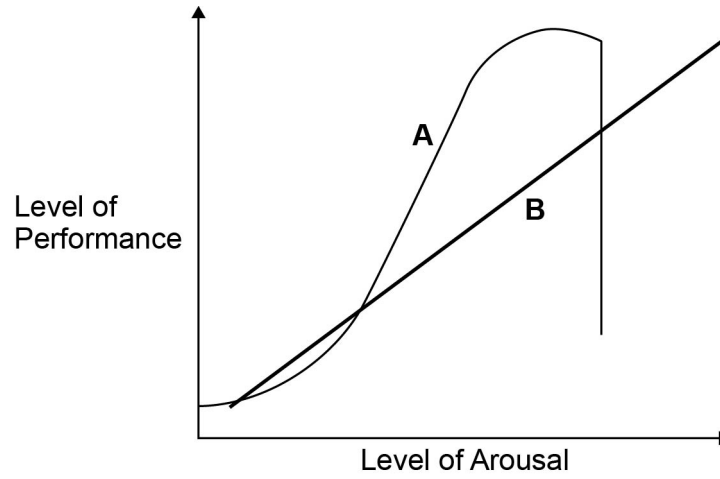
Type of feedback 2: _____



1 0

Figure 3 shows the relationship between arousal and performance for two different theories of arousal, labelled **A** and **B**.

Figure 3



Analyse **Figure 3** to identify when optimal performance occurs for each theory of arousal, labelled **A** and **B**.

[2 marks]

Turn over for the next question

Turn over ►



1 1

Vicky is a badminton player. She has recently begun to play tennis.

Explain the impact of negative **and** zero transfer of learning on Vicky's progress in tennis. Give examples from badminton and tennis to support your answer.

[4 marks]

Negative transfer: _____

Zero transfer: _____

1 2

Figure 4 shows a player taking a corner kick in football.

Figure 4



1 2 . 1

Classify the corner kick in football using the following continua:

- open – closed
- self-paced – externally paced.

Justify your answers.

[2 marks]

Open – closed: _____

Self-paced – externally paced: _____

1 2 . 2

Describe the high – low organisation skill continuum.

[2 marks]

1 2 . 3

Give **one** example of a low organisation skill in football.

[1 mark]

Turn over ►



1	3
---	---

The Triadic model helps to explain attitudes and how they are formed.

Describe how attitudes can be changed through cognitive dissonance.

[3 marks]



1	4
---	---

Coaches need to consider the nature of the skills and the experience of the performers when structuring a practice session.

Evaluate the use of massed **and** distributed practice when coaching a group of beginners, in a game such as basketball.

[8 marks]

Turn over ►



Extra space _____

28

Turn over for Section C

Turn over ►



Section C**Sport and society and technology in sport**Answer **all** questions in this section.**1 5**Which **one** of the following statements accurately describes the term urbanisation?**[1 mark]**

- A** An improvement in living conditions in run-down areas of society
- B** An increase in the proportion of people living in towns compared to the countryside
- C** The import and export of sports throughout the British Empire
- D** The movement from an industrial society to an agricultural society

1 6Which **one** of the following components of fitness can be measured using indirect calorimetry?**[1 mark]**

- A** Aerobic endurance
- B** Flexibility
- C** Muscular endurance
- D** Strength



1	7
---	---

Explain how the two-tier class system influenced the nature of sporting recreation in pre-industrial society.

[4 marks]

Turn over for the next question

Turn over ►



1	8
---	---

Define the terms discrimination and stereotyping **and** explain how each can cause low participation rates amongst underrepresented groups in sport. Give sporting examples to support your answer.

[6 marks]

Discrimination: _____

Stereotyping: _____



1 9

Explain how **two** characteristics of sport are evident in the game of tennis.

[4 marks]

Characteristic 1: _____

Characteristic 2: _____

2 0

Sport England's aim is to increase the number of people participating in sport and physical activity.

Explain **one** physical health benefit **and one** social health benefit to an individual who has increased their level of physical activity.

[4 marks]

Physical health benefit: _____

Social health benefit: _____

Turn over ►



2 1

Table 1 shows the winning times for the men's 100 metres final from previous Olympic Games.

Table 1

Year	Time completed (s)
1952	10.40
1964	10.00
1976	10.06
1988	9.92
2000	9.87
2012	9.63
2016	9.81

Consider how commercialisation **and** the improvement in technology for sports analytics have affected performance in the 100 metres at the Olympic Games. Use the data in **Table 1** to support your answer.

[8 marks]



Extra space

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END OF QUESTIONS

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